MEDICAL PROCEEDINGS

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REDAKSIONEEL · EDITORIAL

THE ISSUE OF PRESCRIPTIONS

A case of interest to medical practitioners was recently heard in the Witwatersrand Local Division of the Supreme Court.*

Dr. X was charged with a number of counts of fraud, each count being based upon a separate prescription signed by him and submitted by a chemist to the S.A.R. & H. Sick Fund for payment. The State alleged *inter alia* that each Sick Fund prescription contained an implied representation that the medicine appearing thereon had been prescribed for the member whose name was on the prescription and that Dr. X had signed a number of prescriptions knowing that his implied representation was not true. The State further alleged that Dr. X had used such prescriptions as a means of paying his personal account with the chemist. The charges of fraud were legally complete without this latter allegation, but if it were true, the fraud would obviously be of a very serious nature.

After hearing evidence for 8 days the Presiding Judge, Mr. Justice Cillie, indicated to the Prosecutor that he found the evidence of the chemist and the chemist's apprentice most unsatisfactory. The Prosecutor, after conferring with the Deputy Attorney-General of the Transvaal, then withdrew the allegation that Dr. X had used the prescriptions as a means of paying his personal account. Once this allegation had been withdrawn, Dr. X pleaded guilty to having signed 20 prescriptions in

* The doctor is referred to throughout as Dr. X.

DIE UITREIKING VAN VOORSKRIFTE

'n Geval van belang vir mediese praktisyns is onlangs in die Witwatersrandse Plaaslike Afdeling van die Hooggeregshof verhoor.*

Dr. X het tereggestaan op 'n aantal aanklagte van bedrog. Iedere aanklag was gegrond op 'n afsonderlike voorskrif wat deur hom onderteken en deur 'n apteker vir betaling aan die Siektefonds van die S.A.S. & H. voorgelê is. Die Staat het onder meer beweer dat iedere Siektefondsvoorskrif 'n stilswygende veronderstelling bevat dat die medisyne wat daarin genoem is, voorgeskryf is vir die lid wie se naam op die voorskrif verskyn het, en dat dr. X 'n aantal voorskrifte onderteken het wetende dat sy stilswygende voorstelling nie waar was nie. Die Staat het verder beweer dat dr. X sodanige voorskrifte gebruik het as 'n middel om sy persoonlike rekening by die apteker te betaal. Die bedrogaanklagte was, uit 'n regsoogpunt, volledig sonder laasgenoemde bewering, maar as dit waar was, sou die bedrog klaarblyklik van 'n baie ernstige aard gewees het.

Nadat die voorsittende regter, regter Cillie, 8 dae lank getuienis aangehoor het, het hy aan die staatsaanklaer gesê dat hy die getuienis van die apteker en die apteker se leerling besonder onbevredigend vind. Die staatsaanklaer het oorleg met die adjunk-prokureur-generaal van Transvaal gepleeg, en het toe die aanklag dat dr. X die voorskrifte gebruik het as 'n middel om sy persoonlike rekening te betaal, terug-

* Na die dokter word daar deurgaans as dr. X verwys.

which the implied representation referred to above was to his knowledge untrue.

The circumstances in which he signed these prescriptions and the approach of the Court to such conduct appear from the remarks delivered by the learned Judge in passing sentence.

The Judge's remarks (and an unofficial English translation of these remarks) appear elsewhere in this issue (p. 459).

A point of considerable interest arose from the charge as framed by the prosecution. The State alleged that by issuing a prescription the accused doctor thereby represented that he had seen and examined the patient, diagnosed the patient's complaint and prescribed the medicine set out in the prescription.

The fact whether the mere issue of a prescription necessarily implied all these representations was not tested in this case, because the circumstances in which certain prescriptions were issued were such (as appear from the learned Judge's remarks) that the accused practitioner had no option but to plead guilty to what his Counsel described as a technical fraud.

It would have been interesting and instructive to have had a ruling on whether a doctor is lawfully or ethically entitled to issue a prescription, e.g. after a telephone call from a patient, without examining the patient personally.

Attention should also be drawn to the learned Judge's remarks about the abuses which may arise from lax practices in the issue of prescriptions, e.g. it is highly improper to issue a prescription for medicine already supplied by the chemist on telephonic instructions from the partner of the doctor signing the prescription.

getrek. Nadat hierdie aanklag teruggetrek is, het dr. X skuld beken op die aanklag dat hy 20 voorskrifte onderteken het waarin die stilswygende voorstelling waarna hierbo verwys is, volgens sy kennis onwaar was.

Die omstandighede waarin hy hierdie voorskrifte onderteken het, en die benadering van die hof tot sodanige gedrag blyk uit die opmerkings van die geleerde regter toe hy vonnis uitgespreek het.

Die regter se opmerkings (en 'n nie-amptelike Engelse vertaling van daardie opmerkings) verskyn elders in hierdie uitgawe (bl. 459).

Die aanklag soos opgestel deur die staatsaanklaer het 'n punt van aansienlike belang te berde gebring. Die Staat het beweer dat die aangeklaagde dokter deur die uitreiking van 'n voorskrif te kenne gee dat hy die pasiënte gesien en ondersoek het, die pasiënt se kwaal gediagnoseer en die medisyne soos in die voorskrif genoem, voorgeskryf het.

Die vraag of die blote uitreiking van 'n voorskrif noodwendig al hierdie voorstellings stilswygend te kenne gee, is nie in hierdie saak getoets nie, omdat die omstandighede waarin sekere voorskrifte uitgereik is, sodanig was (soos blyk uit die geleerde regter se opmerkings) dat die aangeklaagde mediese praktisyn geen opsie gehad het behalwe om skuld te beken op wat sy advokaat as tegniese bedrog beskryf het nie.

Dit sou interessant en insiggewend gewees het om 'n beslissing te verkry oor die vraag of 'n dokter regtens of eties geregtig is om 'n voorskrif uit te reik byvoorbeeld na 'n telefoonoproep van 'n pasiënt, as hy die pasiënt nie persoonlik ondersoek het nie.

Die aandag moet ook gevestig word op die geleerde regter se opmerkings in verband met die misbruike wat kan ontstaan uit lakse gewoontes vir sover dit die uitreiking van voorskrifte betref, byvoorbeeld dat dit hoogs ongepas is om 'n voorskrif uit te reik vir medisyne wat reeds deur 'n apteker verskaf is na telefoniese instruksies van die vennoot van die dokter wat die voorskrif onderteken het.

ABSTRACT

LUPOID SYCOSIS BEGINNING IN INFANCY

The author reports a case of this condition occurring in an Indian male, aged 17 years, complaining of considerable loss of scalp hair.

The lesions were apparently first noticed after an attack of varicella at the age of 3 months. No other members of his family were affected.

The lesions at the time of the examination are illustrated with clinical photographs.

Microscopic examination of the hairs and the scales from the edge of the inflamed areas on the cheek were negative for fungi. Serial biopsies revealed the whole of the corium, and especially the hair follicles, to be the site of a chronic inflammatory process. Another feature was evidence of superficial suppuration and a deeper plasmoma.

Laboratory study revealed the presence, in pustules, of a mixed growth of *Staph. aureus* and *Strep. viridans*, both organisms being sensitive to a variety of antibiotics.

The condition was treated with Terramycin for 2 weeks. By the end of this course of treatment all redness, scaling and infiltration had disappeared, the improvement being maintained without further treatment for a period of at least 4½ months.

The question of the identity of lupoid sycosis (Milton-Brocq) and ulerythema sycosiforme (Unna) is discussed.

[Loewenthal, L. J. A. (1957): Brit. J. Dermatol., **69**, 443.]

MEDICO-LEGAL SECTION · MEDIES-GEREGTELIKE AFDELING

WITWATERSRAND LOCAL DIVISION

THE STATE *vs* DR. X

THE ISSUE OF PRESCRIPTIONS

JUDGE'S REMARKS ON IMPOSING SENTENCE

It is now my duty to pass sentence upon you. I think, however, that it is necessary, before I say what the sentence is, that I set out exactly what you have been found guilty of, what general facts I have taken into account in deciding upon the sentence, and what my reasons are for the sentence I intend imposing.

You pleaded guilty and were found guilty on twenty counts of fraud in relation to the issue of prescriptions in the names of members of the South African Railways and Harbours Sick Fund. The prescriptions were issued for medicines which were not received by the members. Nevertheless, these prescriptions were used by the chemists, with your knowledge, to lodge claims with the Sick Fund and to obtain payment thereon. This conduct was fraudulent and the fraud was committed with the co-operation of the chemists.

I accept that prescriptions were issued in three particular types of case: Firstly in the case where you prescribed for a patient a remedy which did not appear in the formulary of the Sick Fund. In such a case, after consultation with the chemist the medicine was in fact supplied and thereafter there was substituted in the place of the first prescription another one wherein there appeared one or two medicines of which the price was equal to the price of the medicine which was delivered to the patient.

In the second case, you obtained medical requirements for use in connection with members of the Sick Fund. These requirements could have been obtained from another source, but as a matter of convenience and perhaps for other reasons, they were obtained from a chemist. In order to ensure that the chemist was paid for these medical requirements, there were issued false prescriptions on which there appeared medicines the price whereof was equal to the price of the requirements supplied.

The third type of case was that where medicines were supplied to patients by the chemist after consultation with you or your colleagues over the telephone and where you thereafter were asked to supply prescriptions

WITWATERSRANDSE PLAASLIKE AFDELING

DIE STAAT *vs* DR. X

DIE UITREIKING VAN VOORSKRIFTE

REGTER SE OPMERKINGS BY OPLEGGING VAN VONNIS

Dit is nou my plig om oor u vonnis te vel. Ek meen egter dat dit noodsaaklik is voordat ek sê wat die vonnis is, dat ek moet aanstip presies waaraan u skuldig bevind is, watter algemene feite ek in ag geneem het om te besluit watter vonnis om op te lê, en watter redes ek het vir die vonnis wat ek gaan oplê.

U het skuldig gepleit en is skuldig bevind op twintig hoofde van bedrog met betrekking tot die uitreiking van voorskrifte vir pasiënte van die Suid-Afrikaanse Spoorweë se Siekefonds. Die voorskrifte is uitgereik vir medisyne wat nie deur die pasiënte ontvang is nie, en is deur die aptekers gebruik, met jou medewete, om eise in te stel teen die Siekefonds en betaling daarop te verkry. Hierdie optrede was bedrieglik en die bedrog is gepleeg met die medewerking van die aptekers. Ek aanvaar dat voorskrifte uitgereik is in drie besondere soort gevalle: Eerstens in die geval waar u aan 'n pasiënt 'n middel voorgeskryf het wat nie op die formulier van die Siekefonds verskyn nie. In so 'n geval is, na raadpleging met die apteker, die medisyne wel gelewer en daarna is 'n ander voorskrif in die plek van die eerste gestel waarop daar dan een of twee medisynes voorkom waarvan die prys gelykstaan aan die prys van die medisynes wat gelewer is aan die pasiënt.

In die tweede geval het u mediese benodigdhede verkry vir gebruik in verband met pasiënte van die Siekefonds. Hierdie benodigdhede kon uit 'n ander bron verkry word, maar weens die gerief en om ander redes, miskien, is dit verkry van die apteker. Om te verseker dat die apteker vir daardie mediese benodigdhede betaal word, is daar dan valse voorskrifte uitgereik waarop medisynes verskyn waarvan die prys gelykstaan aan die benodigdhede wat verskaf is.

Die derde soort geval is die waar medisyne aan pasiënte uitgereik is deur die apteker na oorlegpleging met u en u kollegas per telefoon en waar u daarna gevra is om die voorskrifte vir daardie uitgereikte medisyne te verstrek. In plaas van die naam van die pasiënt en sy nommer en adres en die medisyne stipte-

for the medicines so supplied. Instead of the name, number and address of the patient and the medicine being meticulously written on to the prescriptions, the name of one patient was used for the prescription of more than one medicine and sometimes not for the medicine which was supplied, but other medicine of an equivalent monetary value.

All twenty contraventions form, in my opinion, part of a system and when I come to the sentence itself, I will consider all the contraventions together and impose one sentence in respect of them all.

Your counsel has submitted that this is not a case in which imprisonment should be imposed. I agree with him but this is only the case because you have been found guilty of fraud out of which you obtained no personal financial or other advantage. There was evidence that in some respects you enriched yourself personally through prescriptions, but after the amendment of the indictment that allegation was no longer made against you and you pleaded guilty to fraud from which you obtained no benefit. It is not always possible or desirable to say what would happen in other circumstances, but it is difficult to think of any good reason why imprisonment would not be the proper punishment if prescriptions were used for personal enrichment.

Your counsel has also submitted that this is not a case for a suspended sentence. Again I agree with him. You are a young man, a qualified doctor, and you are standing on the threshold of a life which you can apply to the great benefit of the community. You have a clean record. I trust that I am right in assuming that the fact of this prosecution will be sufficient to deter you from committing an offence such as this again; I think therefore that it is not necessary to hold a sword over your head in order to ensure that you do not again commit a fraud of this nature.

Your counsel has in the third place submitted that the best sentence in this case would be one of a caution and discharge. There, however, I cannot agree with him. There are a number of circumstances which I must take into account. Firstly there is the fact that the malpractice, as has been set out in these twenty cases of fraud, is one which, according to the evidence, was very much in vogue not only in your area but also elsewhere. You arrived there as a young doctor and found this system in force. I regard that factor as mitigating, but not as an excuse. I also want to say that there were mentioned in this Court names of doctors who, the witness alleged, were guilty of this sort of conduct and worse, whereby they obtained personal benefit from

lik neer te skryf op die voorskrifte, is die naam van enige pasiënt gebruik vir die voorskrif van meer as een medisyne, en somtyds wel nie vir medisyne wat gelewer is nie, maar ander medisyne van gelykstaande geldelike waarde.

Al twintig oortredings maak na my mening deel uit van 'n stelsel en as ek by die vonnis self kom, sal ek al hierdie oortredings saam neem en een vonnis oplê vir almal.

U advokaat het aangevoer dat dit nie 'n geval is waar tronkstraf opgelê moet word nie. Ek stem met hom saam in daardie opsig, maar dit is alleen so omdat u skuldig bevind is aan bedrog waaruit u geen persoonlike finansiële of ander voordeel getrek het nie. Daar was getuienis dat u in sommige opsigte met voorskrifte uself persoonlik verryk het, maar na die wysiging van die klagstaat is daardie aantyging nie meer teen u gemaak nie en het u skuldig gepleit op bedrog waaruit u geen voordeel getrek het nie. Dit is nie altyd moontlik of wenslik om te sê wat in ander omstandighede sou gebeur het nie, maar dit is moeilik om te dink dat daar enige goeie redes sou kon bestaan het waarom tronkstraf nie die aangewese straf sou gewees het indien die voorskrifte vir persoonlike verryking gebruik was nie.

U advokaat het ook aangevoer dat dit nie 'n geval is vir 'n opgeskorte vonnis nie. Weereens is ek dit met hom eens. U is 'n jong man, 'n gekwalifiseerde dokter, en u staan op die drumpel van 'n lewe wat u kan aanwend tot groot voordeel van die samelewing. U het 'n skoon verlede. Ek vertrou dat ek reg het om aan te neem dat die feit van hierdie vervolging vir u genoegsame afskrikking sal wees sodat u nie weer uself aan so 'n oortreding skuldig sal maak nie; ek meen derhalwe dat dit nie nodig is om 'n swaard oor u hoof te hang om te verseker dat u nie weer bedrog van hierdie aard pleeg nie.

U advokaat het ten derde aangevoer dat die beste vonnis in hierdie geval een sou wees van 'n waarskuwing en ontslag. Daar, egter, kan ek nie met hom saamstem nie. Daar is 'n aantal omstandighede wat ek in ag moet neem. Ten eerste is daar die feit dat die wanpraktyk, soos in hierdie twintig gevalle van bedrog uiteengesit, een is wat volgens die getuienis nie net alleen in u gebied nie maar elders ook in volle swang was. Dit is so dat as 'n jong geneesheer u daar aangekom het en hierdie stelsel gevind het. Daardie feit beskou ek as versagtend, maar geen verskoning nie. Ek wil daarna verwys dat daar name in hierdie Hof genoem is van geneeshere wat—so het die getuie beweer—hulself skuldig gemaak het aan hierdie soort gedrag en erger gedrag waar hulle uit hul bedrieglike optrede en valse voorskrifte persoonlike voordeel trek. Hierdie Hof

their fraudulent conduct and false prescriptions. This Court does not judge anybody who has not had an opportunity of defending himself here. Nevertheless, these allegations are regarded in your favour because you are the person to be sentenced—namely that these malpractices in fact took place.

It has been submitted that you, as a medical practitioner, are subject to the jurisdiction of the Medical Council and that that Council might at some time also take action in this case. There is a measure of uncertainty whether I am entitled to take such a factor into consideration when I decide on what sentence to impose. In this particular case I do not know whether the Medical Council intend acting and, if so, whether they are going to apply disciplinary measures and, if they do apply such measures, which particular measures. I have therefore decided that this is a factor which I can leave out of account completely.

It may be said that the system which you found there was one which lent itself to abuse and that the opportunity gave rise to the inclination. That may be so. I am not aware of what steps the Sick Fund takes to prevent abuses and malpractices, that is, abuses and malpractices such as these and such as those about which evidence was given. It is possible that they can take stricter measures; it is possible that stricter measures cannot be taken. I must, however, bear in mind that the Sick Fund placed its faith in professionally trained persons, doctors and chemists, persons from whom honest conduct could have been expected. I can only express the view that the Sick Fund should seriously consider whether it is not possible to take stricter measures and, if it cannot be done, then it may be that punishments which are to be imposed in future for this sort of offence will not be as light as that which I intend imposing in this case.

I have already mentioned that this contravention was not for your own advantage; it makes the contravention less reprehensible, but it is nevertheless a contravention against which the Court and the law must be on their guard. It is a small and almost innocuous beginning to issue a false prescription in payment for the medical requirements of the firm or in payment for other medicines which have already been supplied, yet it is the first step which can lead to great abuse for which the punishment should be very severe. As a result of this contravention in a minor degree, you were placed in a position in which you should never have been placed; the chemist was obliged to be dishonest and his apprentice was not only taught to be dishonest, but he, according to his

veroordeel niemand wat nie 'n geleentheid gehad het om homself hier te verdedig nie. Derhalwe word daardie feite net beskou as iets in u guns, omdat u die persoon is wat gevonnis moet word—dit is, naamlik, dat hierdie wanpraktyke wel plaasgevind het.

Daar is aangevoer dat u as geneesheer onderhewig is aan die jurisdiksie van die Mediese Raad en dat daardie Raad op een of ander tydstip in hierdie geval ook sal ingryp. Daar bestaan 'n mate van onsekerheid of ek so 'n feit in ag mag neem wanneer ek tot beslissing geraak oor 'n vonnis wat ek wil oplê. Maar in hierdie besondere geval weet ek nie of die Mediese Raad gaan optree nie en indien wel of hulle tugmaatreëls gaan toepas, en as hulle tugmaatreëls toepas, welke maatreëls dit sal wees nie. Ek het derhalwe besluit dat dit 'n aangeleentheid is wat ek heeltemal buite rekening kan laat.

Daar mag gesê word dat die stelsel wat u daar gevind het, 'n stelsel is wat homself leen aan misbruik en dat die geleentheid die geneentheid gebaar het. Dit mag so wees. Ek is nie bewus van welke maatreëls die Siekefonds tref om misbruike en wanpraktyke te voorkom nie, d.w.s. misbruike en wanpraktyke soos hierdie en soos die waarvan daar getuig is. Dit is moontlik dat hulle strenger maatreëls mag tref; dit is moontlik dat strenger maatreëls nie getref kan word nie. Ek moet egter in gedagte hou dat die Siekefonds vertroue geplaas het in professionele, opgeleide manne, geneeshere en aptekers—persone van wie eerlike optrede verwag kon word. Ek kan net die mening uitspreek dat die Siekefonds ernstig moet oorweeg of dit nie moontlik is om strenger maatreëls te tref nie en indien dit nie gedoen kan word nie, dan mag dit blyk dat strawwe wat in die toekoms opgelê word vir hierdie soort oortreding nie so lig sal wees as die een wat ek van plan is om in hierdie geval op te lê nie.

Ek het reeds gemeld dat hierdie oortreding nie vir u eie voordeel was nie; dit maak die oortreding minder laakbaar, maar dit maak dit nogtans 'n oortreding waarteen die Hof en die gereg moet waak. Dit is 'n klein en amper onskadelike begin om 'n valse voorskrif uit te reik vir betaling van mediese benodigdhede vir die firma of vir die betaling van ander medisyne wat reeds uitgereik is, nogtans is dit die eerste stap wat kan lei tot 'n geweldige misbruik waarvoor die straf baie ernstig en hard behoort te wees. As gevolg van hierdie oortreding in 'n kleiner opsig, is u in 'n posisie gestel waarin u nooit gestel moes gewees het nie; is die apteker verplig om oneerlik te wees en is sy vakleerling nie alleen geleer om oneerlik te wees nie, maar het hy, volgens

own evidence, committed further acts of dishonesty which approach closely to blackmail.

All these facts must be taken into account when the Court decides what punishment to impose according to certain established principles. The modern tendency is that the offence as such must not be punished, but that the punishment must be imposed on the offender and that all his personal circumstances should be considered. Yet there must not be forgotten what offence has been committed. There is the principle that the punishment must be such that the offender must be deterred and, if possible, be prevented from committing such an offence again. This aspect and the necessity for such a punishment were considered in my decision concerning imprisonment and a suspended sentence. Whether others are going to be deterred by this punishment or by the fact of this prosecution, I cannot judge.

In my opinion all relevant circumstances must be taken into account in the passing of sentence and neither must too little nor too much weight be given to any particular aspect. Only if each aspect is given such emphasis as the particular circumstances demand will the sentence bear the hallmark of fairness, of fairness to the offender, of fairness to the person prejudiced and of fairness to the whole community. A fair sentence is the requirement of law and justice, the corner-stones of a civilized community.

After considering all these facts I have come to the conclusion that I must impose a fine. It is not necessary for me, owing to the position you occupy, to enquire into your ability to pay the fine seeing that it should be well within your resources. The sentence which I impose is one of a fine of R200.00 or alternatively 3 months imprisonment.

sy eie getuienis, verdere oneerlikheid gepleeg wat baie na aan afpersing kom.

Al hierdie feite moet in ag geneem word as die Hof besluit watter straf om op te lê volgens sekere vasgelegde beginsels. Die moderne neiging is dat die misdaad as sulks nie gestraf moet word nie, maar dat die straf op die oortreder gelê moet word en dat al sy persoonlike omstandighede in ag geneem moet word. Tog moet nie vergeet word watter misdaad die oortreder gepleeg het nie. Daar is die beginsel dat die straf sodanig moet wees dat die oortreder afgeskrik en, indien moontlik, verhoed moet word om weer so 'n oortreding te pleeg. Hierdie aspek en die noodsaaklikheid vir so 'n straf is in die oog gehou by die besluite oor tronkstraf en 'n opgeskorte vonnis. Of ander afgeskrik gaan word deur hierdie straf of deur die feit van hierdie vervolging, kan ek nie oor oordeel nie.

Na my mening moet alle omstandighede wat ter sake is in ag geneem word by die oplegging van vonnis en moet aan geen een van hierdie besondere aspekte te min of te veel gewig gegee word nie. Alleen as op elkeen die klem gelê word wat in die besondere omstandighede nodig is, sal die vonnis die stempel van billikheid dra, billikheid teenoor die oortreder, billikheid teenoor die persoon wat benadeel is en billikheid teenoor die hele gemeenskap. 'n Billike vonnis is die vereiste van reg en geregtigheid, die hoekstene van 'n beskaafde gemeenskap.

Nadat ek al hierdie feite oorweeg het, het ek tot die gevolgtrekking gekom dat ek 'n boete moet oplê. Dit is nie vir my nodig, weens die posisie wat u beklee, om ondersoek in te stel na u vermoë om die boete te betaal nie aangesien dit wel binne u perke behoort te wees.

Die vonnis wat ek oplê is een van R200.00 boete of drie maande gevangenisstraf.

PNEUMOCONIOSIS IN CLEANERS OF STEEL CASTINGS

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This paper analyses the pneumoconiosis hazard in a group of foundrymen known as fettlers or casting dressers. Intensive research and publicity about silicosis from the very large gold mining industry in South Africa has tended to obscure the fact that a number of industrial dusts may produce pneumoconiosis.

It is well known that pneumoconiosis occurs

among iron and steel foundrymen, and a number of publications have indicated that the most serious risk is among fettlers or dressers, especially steel foundry fettlers.[1-3] Fettling or dressing comprises a variety of procedures whereby the burnt-on moulding sand and rough edges of the castings are cleaned off. Silica sand and clay are the cheapest versatile materials for making moulds in the foundry industry and have been used universally. Before reaching the fettlers the castings may undergo a variety of preliminary cleaning treatments. They may be shot-blasted or sand-blasted and they may be subjected to chipping, stripping or rumbling.

The fettling or cleaning processes include a variety of procedures using tools such as pneumatic chisels and hammers, abrasive wheels and the oxy-acetylene flame.

There are certain presumptive reasons[4] why the incidence of dust diseases of the lungs is higher in steel than in iron foundry workers. The melting point of steel is approximately 1,600°C. as opposed to 1,100°C. for iron. Therefore there is a greater tendency for the metal to penetrate the sand mould and cause burning-on of the moulding sand on steel than on iron castings. The burnt-on sand is difficult to remove and pneumatic chisels are used to clean steel castings (whereas hand tools usually suffice in iron fettling shops). The pneumatic tool breaks up the sand granules into small particles. Finally, the mixtures used for making moulds for steel castings contain more free silica than do moulds for iron castings. Steel moulding sand contains up to 99% of free silica, whereas iron moulding sands rarely have more than 80 per cent, and usually have less.

Another factor which may increase the incidence of dust diseases in steel fettling is that the silica burnt on to the steel casting may be in a form which is more irritant than the quartz of the original mould. Silica exists in 3 forms:

Quartz, which is stable at temperatures up to 870°C.;

Tridymite, which is stable between 870°C. and 1,400°C.; and

Cristobalite, which is stable between 1,400°C. and the melting point.

There is evidence that the fibrogenic activity is greater from cristobalite and tridymite than from quartz and that some of the quartz is transformed to cristobalite during steel founding.[5, 6]

STEEL AND IRON FOUNDING IN THE SOUTH AFRICAN RAILWAYS

The South African Railways has carried on iron and steel founding since 1922. Mass miniature radiography of the foundry staff in 1953 and sporadic X-rays of individuals revealed pneumoconiosis only among men who had been fettlers in the steel foundry at some stage of their careers. Thus a more detailed investigation was undertaken among fettlers who worked in the steel foundry.

Fettling in the South African Railways is classed as a semi-skilled work and it gives scope for the advancement of unskilled White men. Payment is by 'bonus' or piecework and, because of the amount of work available, overtime to 12-hour shifts has been common.

The steel fettling area has been moved on a number of occasions and thus it cannot be claimed that the analysis of atmospheric conditions in the presently used shop is an accurate sample of conditions as they previously existed. However, the shop used immediately before the present one was open on 2 sides and the present one is a closed shed without any mechanical ventilating system, so that conditions at present would be expected to be no better than before.

METHODS AND MATERIALS

Atmospheric Dust in the Fettling Area. An extensive investigation of the atmospheric dust was carried out on 10 June 1958 in the presently used shop; 3 sampling instruments were used: a Konimeter, a thermal precipitator, and an electrostatic precipitator. Eleven Konimeter samples were taken, each close to the face of a working fettler, 9 using pneumatic chisels and 2 using grinding wheels. The thermal precipitator was used at the same time and near the Konimeter; also, during the same period, an electrostatic precipitator was functioning in the middle of the row of working fettlers.

Konimeter and thermal precipitator counts were made after ignition and again after acid immersion and re-ignition. The Konimeter samples were examined with a dark field illumination using a magnification of 150, and particles of less than 5 microns counted, each count being the average of 4 spots. The thermal precipitator samples were examined with a light field using a magnification of 900.

Radiological and Clinical Examinations. In 1953 the records of all men who were employed in the mechanical depot at Pretoria were examined and every man who had been

a dresser of steel castings was X-rayed. Subsequently, each year, the men who were actively occupied as castings dressers were X-rayed on 14 × 10 inch plates. They were also clinically examined and a detailed occupational history was taken. All the radiographs (except a few taken in 1953 and reported on by the Pneumoconiosis Bureau) were read by 2 radiologists and a physician specializing in occupational dust diseases and the readings reported in this paper are the agreed or majority readings. The *International Classification of Persistent Radiological Opacities in the Lung Fields Provoked by the Inhalation of Dust*[7] was used to classify each case. However, although 67 cases were radiographed, only 51 were read in terms of the International Classification because 16 cases whose radiographs are not available were read before the decision was taken to use this classification.

RESULTS

Dust Samples. Konimeter samples taken near the breathing zones of each of the 9 fettlers using pneumatic chisels had a mean count after ignition and immersion of 400 particles per c. cm., with a range of 100 to 800 particles.

TABLE 1. PARTICLE SIZE DISTRIBUTION OF DUST COLLECTED BY THERMAL PRECIPITATOR (× 900 LIGHTFIELD ILLUMINATOR) AS AT BREATHING LEVEL OF STEEL FETTLERS

Particle Size (In Microns)	*Particles per c.c.*			
	After Ignition		*After Ignition, Acid Immersion and Ignition*	
	No.	%	*No.*	%
0·25	1,010	52·0	255	26·3
0·25—0·5	390	20·0	206	21·2
0·5 —1·0	309	15·8	240	24·8
1·0 —1·5	81	4·15	111	11·4
1·5 —2·0	70	3·64	49	5·05
2·0 —2·5	25	1·26	29	2·99
2·5 —3·12	16	0·78	21	2·16
3·12—3·75	16	0·78	19	1·96
3·75—5·0	16	0·78	19	1·96
5·0 —6·25	9	0·40	10	1·03
6·25—7·00	4	0·18	7	0·72
7·00	4	0·18	4	0·41
All Particles	1,950	100%	970	100%

After ignition only, the mean was 610 particles and the range 370 to 1,250 per c. cm.

The 2 samples taken near the breathing zones of the fettlers using grinding wheels showed 460 and 600 particles per c. cm. after ignition and immersion and 600 and 800 particles after ignition only.

The size distribution of dust particles collected in the thermal precipitator is shown in Table 1. After ignition 95% of the particles were less than 2 microns and 5% were less than 0.25 microns.

TABLE 2. RADIOLOGICAL DIAGNOSIS OF DISCRETE OPACITIES IN DRESSERS OF STEEL CASTINGS (INCLUDING SHOT-BLASTING AND FLAME CUTTING)

Exposure (Years)	*No. of Men*	*No. of Cases*	*Radiological Classification*
0— 4	30	—	
5— 9	23	1	LPi
10—14	11	2	Lm_2, tb, em: Lm_1.
15—19	1		
20—24	3	3	Lm_2, Lm_3: Ln_3, A.
25—30	—	—	
30—35	1	1	Miliary nodular appearance. (at *Post mortem*, malignant islands and silicotic nodules)
All Cases	69	7	

The sample of dust collected in the electrostatic precipitators yielded 13% of free silica.

A specimen of the mould sand which adheres loosely to the casting after the mould is broken away was removed by hand and analysed by X-ray diffraction at the Dust and Ventilation Laboratories of the Chamber of Mines. The specimen was shown to contain 55% quartz and 18-20% cristobalite.

Radiological Findings. The readings of the most recent radiographs of each man have provided the data for radiograph readings of this section. Table 2 shows the number of men according to the period of exposure to fettling and in each group the number in whom discrete radiological opacities were observed. The incidence clearly rises with exposure. There is one case among the 53 men who had less than 10 years of exposure, 2 cases of 12 men who were exposed for from 10 to 20 years, and 4

cases of the 4 men exposed for more than 20 years. Also shown in the Table are the symbols indicating the X-ray diagnosis, using the International Classification. One case which has 30 years of exposure has not had the classification applied, but he has died and a post-mortem examination confirmed the presence of nodules of silicosis. (He died of carcinomatosis).

Table 3 shows the cases which were radiologically diagnosed as having linear opacities (L).

TABLE 3. RADIOLOGICAL DIAGNOSIS OF LINEAR OPACITIES. (L) IN DRESSERS OF STEEL CASTINGS (INCLUDING SHOT-BLASTING AND FLAME CUTTING)

Exposure (Years)	*No. of Men*	*No. of Cases with Linear Opacities*
0— 4	17	—
5— 9	22	6
10—14	9	6
15—19	—	—
20—24	3	3
25—30	—	—
All Cases	51	15

It is clear from Table 3 that, as in the cases with discrete nodules, the incidence of linear opacities rises with exposure. However, the influence of age on the frequency of the appearance of linear opacities cannot be separated from that of exposure to dust because of the small number of cases involved in those data.

Clinical Findings. Considering the 7 cases which were considered to have radiological evidence of pneumoconiosis (discrete opacities), one man with 30 years' exposure died after a pneumonectomy for carcinoma of his left lung. Post-mortem examination revealed nodules of silicosis and of secondary malignant deposits of the other lung.

One case, aged 54, has had 12 years' service as a fettler and another 18 years in the foundry on other work. He is diagnosed as L, m_2, tb, em. He has extensive nodulation of both upper zones with massive shadow formation especially on the left, consistent with tuberculo-silicosis. Cultures were negative for tuberculosis. The consultant physician reported:

'He is appreciably disabled but can still do moderate work. The disability is only partly due to silicosis as there is evidence of rheumatic mitral disease with ECG evidence of resulting chamber enlargement.'

The patient elects to carry on his occupation and, although it is strenuous, is still coping with his work.

One case had hypertension and died of heart disease. He had been diagnosed as Lm after 11 years as a fettler.

The other 4 cases have had little evidence of cardio-pulmonary disability as clinically assessed, and are at present judged to be fit to continue with 'moderate' work at least.

DISCUSSION

It is not possible to isolate and measure accurately the effects of working as a dresser because of a number of reasons:

i. Men may join and leave the occupation at will and also because of promotion and for other administrative reasons. A man may leave the occupation because of health considerations and thus bias the 'population at risk,' both because he may be lost to observation and, if available for observation, because he has cut short the effects of fettling.

ii. Fettlers are exposed to other dust sources if the fettling area is in the same building as the rest of the foundry work.

iii. Fettlers may have been exposed to other dust hazards before they became fettlers and after they left the occupation.

It is probable, however, that these factors did not play an important part in this analysis because there does not appear to be any significant dust hazard in the rest of the foundry, as judged by the survey findings with mass miniature radiography and because of the absence of case finding throughout the years. When pneumoconiosis does occur in a fettler, the disablement is for many years not severe and would hardly influence any workman to leave the occupation. The occupation is sought after because it offers advancement and good pay to unskilled men.

The Significance of X-ray Shadows in Fettlers. The dust inhaled by the fettler is finely divided and is invisible to the naked eye so that it is difficult to convince workers that it exists. Although the silica contained in the dust is possibly more fibrogenic on lung tissue than the usual quartz dust, it is a relatively small fraction of the dust and it has been claimed that radiographic nodular shadows of these workers is siderosis and not silicosis.

McLaughlin and Harding[2] discuss this claim in a paper in which they describe the post-mortem findings in a large series of foundrymen. They point out that estimations of iron in the lungs of 63 foundry workers gave an average figure (expressed as Fe_2O_3) of 1.635% of the dried lung, which is some 6 times greater than that given for normal lungs of similar age. They add, however, that they do not believe that the nodular shadows shown on the plates of the fettlers represent pure siderosis and that:

'The underlying condition in the lungs is more likely to be a mixed dust fibrosis, though admittedly some of the shadows may be associated with deposits of iron pigment without fibrosis.'

Thus, discrete radiographic opacities as described in these fettlers (p, m, n) are considered to be evidence of pneumoconiosis, probably mixed dust pneumoconiosis.

However, there is disagreement about the significance of linear opacities (L). The Committee which reported on the use of the International Classification states:

'Although there was complete agreement that linear opacities could be seen in those who had never been exposed to dusts, it was held by some experts that they occurred with greater frequency among workers exposed to dust in industries other than coal mining.'

In the present series category L increase in frequency with length of service (and with age).

PREVENTION OF DUST DISEASE IN FOUNDRIES

The prevention of pneumoconiosis depends on the prevention of dust formation and, in so far as this fails, control of airborne dust in the breathing zone of the workmen. This subject has received a lot of attention in recent years and much can be done by engineering and working methods to eliminate the dust hazard from fettling.[6-9]

Since this investigation was completed, the fettling shop discussed in this paper has been rehoused in a modern shop in which the best available dust extractors are fitted to all the casting cleaning devices and the apparatus is constantly being improved.

SUMMARY

A group of men has been studied as if their only respiratory dust hazard had been derived from steel fettling, although the men have been exposed to other dusts while doing work other than fettling before becoming fettlers and occasionally after leaving the occupation. The justification for this procedure is that steel fettling has been known to have the most serious pneumoconiosis risk in foundry work and that no cases of pneumoconiosis other than in steel fettlers have previously been reported in the South African Railway foundries.

The dust collected in the breathing zone is shown to be fine, with 95% of particles being smaller than 0.25 microns after ignition. A specimen of the sand which adheres to the casting when it is removed from the mould contains 18-20% of cristobalite.

X-ray diagnoses were made according to the International Classification. If discrete opacities are taken as the minimum indication of pneumoconiosis, 7 cases are present in the 69 men exposed. The incidence clearly rises with occupational exposure, there being 4 cases out of 4 exposed for more than 20 years. One case died of lung carcinoma and one of heart disease; all the other cases are able to continue with their work, 2 being moderately incapacitated and the others have very little disability.

We are grateful to the General Manager of the South African Railways for permission to submit this paper for publication: to Dr. G. K. Sluis-Cremer, of the Miners Chest Clinic, who examined cases and read plates; to Dr. J. A. Louw and Dr. C. Theron who read the plates; to Dr. L. G. Walters, Director of the Pneumoconiosis Bureau of the Department of Mines and his staff who examined the men and the radiographs in the early stage of the investigation: to Mr. R. S. J. du Toit, Deputy Inspector of Mines, Pneumoconiosis Research Section of Department of Mines and his staff who carried out dust sampling, counting and analysis; to Dr. I. Webster, Sub-Director of the Pneumoconiosis Research Unit of the S.A. Council for Scientific and Industrial Research for arranging the X-ray diffraction analysis; and to Mr. W. T. Lund, Chief Health Inspector and his staff for carrying out the field investigations.

REFERENCES

1. McLaughlin, A. I. G. *et al.* (1950): *Industrial Lung Diseases of Iron and Steel Foundry Works*, H.M.S.O., London.
2. McLaughlin, A. I. G. and Harding, H. E. (1956): A.M.A. Arch. Indust. Hlth., **14**, 4.
3. Keatings, Gerald F. (1960): *Iron Founding Health and Safety*. The Council of Ironfounding Association, London.
4. Hunter, Donald (1957): *The Diseases of Occupation*, 2nd ed., London: The English Universities Press, Ltd.
5. King, E. J., Monanty, G. P., Harrison, C. V. and Nagelschmidt, G. (1953): Brit. J. Indust. Med., **10**, 9.
6. Parkes, W. B. (1960): *Iron Founding Health and Safety*. The Council of Ironfounding Association, London.
7. International Labour Office (1953): *Third International Conference of Experts on Pneumoconiosis*, Sidney, 1950. *Record of Proceedings*, Geneva (Revised).
8. McLaughlin, A. I. G. (1953): Lancet, **2**, 265.
9. Herring, W. H. (1956): Brit. J. Indust. Safety, **3**, 38.

INFECTIOUS MONONUCLEOSIS

WITH THROMBOCYTOPENIC PURPURA

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Cutaneous purpura in infectious mononucleosis was first described in 1923, and a mention of active thrombocytopenic purpura in this condition was made in 1927. Since then a few cases have been described in the English literature.

The mechanisms responsible for the occurrence of thrombocytopenic purpura in infectious mononucleosis have not been conclusively demonstrated, though theories of its causation are described by Ogilvie and Parry.[7] They consider a number of possible factors and, of these, the most likely explanations are:

1. An association with dysfunction of the spleen, either by means of a selective inhibiting effect on platelet production or by selective sequestration of platelets.

2. A faulty elaboration of an anti-platelet substance, similar to the anti-immune mechanism in haemolytic anaemia.

Dameshek and Grassi[8] attribute the thrombocytopenic purpura to a state of hypersplenism, in which the spleen inhibits the formation of platelets from the megakaryocytes, and prevents the release of platelets from the marrow.

Another theory is that the spleen might destroy circulating platelets at an accelerated rate. However, in only one half of the reported cases of thrombocytopenic purpura in infectious mononucleosis has there been demonstrable splenomegaly.

Other studies on the etiology of thrombocytopenic purpura point to the possible existence of a specific humoral factor in the plasma, such as a platelet agglutinin or lysin.

It is conceivable that in the purpura associated with infections such as infectious mononucleosis, the infectious agent (presumably a virus in infectious mononucleosis) combines with the patient's platelets to form an antigen. In some patients, depending on individual susceptibility, this antigen may lead to formation of antibodies (humoral factor) which may destroy platelets, and possibly injure megakaryocytes. This mechanism is analogous to that proved for Sedormid, and some other drug-induced purpurae.

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CASE REPORT

A female, aged 24 years, was first seen on 31 August 1960 complaining of a sort throat. She had been to see a dentist the previous day as she had a painful tooth, but he thought it inadvisable to extract the tooth in the presence of a throat infection.

She was given penicillin injections, and by 1 September 1960 the painful throat no longer troubled her, but she noticed bruises on her legs and small red spots on the roof of her mouth.

She was a well built young adult female. There were a few petechial haemorrhages on the palate, she had numerous bruises on her legs and thighs, but no lymph nodes were palpable in the neck, axillae or inguinal regions.

Nothing abnormal was found in the cardiovascular or respiratory systems. There was no hepatomegaly, but the tip of the spleen was palpable.

There was no abnormality of the central nervous system.

SPECIAL INVESTIGATIONS

Blood Count.
Hb.: 14.2 gm.%.
PCV: 43 Volumes%.
MCC: 33%.
Leucocytes: 13,800 per c.mm.
Neutrophils: 25.0 (3,470).
Eosinophils: 1.5%.
Monocytes: 10.0%.
Lymphocytes: 63.5% (8,800).
Platelets: 10,000 per c.mm. and atypical lymphocytes were noted.
Coagulation time: 7 minutes (Lee and White method at 37°C.).
Bleeding time: Longer than 12 minutes (Duke's method).
Clot retraction (MacFarlane): 37%.
Fluid volume of blood clot: 23%.
Fibrinogen: 268 mg. per 100 ml.
Hess Test: Strongly positive.
Paul Bunnell Test (Barret's Modification): Strongly positive.

A bone marrow biopsy was done on 12 September 1960. It was of good cellularity and easily obtained. There was normal myelo- and erythro-poiesis.

Megakaryocytes appeared to be present in normal numbers, but there was an almost total

absence of 'budding,' which explained the scarcity of platelets. Another abnormality noticed was cytoplasmic vacuolation, which has been explained as due to the effect of antibodies.

Atypical mononuclear cells were observed.

Clinical Course. Prednisone therapy was commenced on 10 September 1960, the dose initially being 15 mg. *q.i.d.* On 16 September another platelet count was done and found to be 26,000 per c.mm. Some new ecchymoses appeared on the arms, but the tip of the spleen was no longer palpable. The Paul Bunnell test was repeated on 16 September, when the titre was 1 : 112.

On 25 September the platelet count was 19,000 per c.mm.

As there had been a poor response to the prednisone, it was substituted with 6-methyl-prednisolone—15 mg. *t.d.s.* were given, and on 30 September the platelet count was 27,000 per c.mm.

On 4 October the platelet count was 60,000 per c.mm. The Paul Bunnell titre was 1 : 448. There were no new ecchymoses, and the old ones were resolving.

On 6 October the platelet count was 90,000 per c.mm., and the dose of 6-methyl-prednisolone was reduced to 16 mg. *b.d.*

As the patient had gained 10 lb. in weight, and had a 'cushingoid' appearance of the face, diuretics and potassium were administered.

On 10 November her platelet count had gone up to 225,000 per c.mm., all ecchymoses had disappeared, and the dose of 6-methyl-prednisolone was further reduced to 8 mg. *b.d.*

When last seen on 28 November 1960 her platelet count was 260,000 per c.mm., and she was being maintained on 4 mg. of 6-methyl-prednisolone daily.

DISCUSSION

In this case reported the bone marrow findings, except for the presence of atypical mononuclear cells, are identical with those found in primary thrombocytopenic purpura or Werlhof's disease. This fact suggests that the same etiological factor or factors may operate in both primary thrombocytopenic purpura and that associated with infectious mononucleosis.

The response to steroid therapy initially was not remarkable, but when prednisone was substituted by 6-methyl-prednisolone, the platelet response was striking, suggesting that there might be a selectivity of action of certain steroids in thrombocytopenic purpura associated with infectious mononucleosis.

SUMMARY

A case of infectious mononucleosis complicated by thrombocytopenic purpura has been described in which there was a good response to therapy with 6-methyl-prednisolone.

I wish to thank Dr. Kenneth Mills, Superintendent of the General Hospital, Johannesburg, who has given me permission to submit this case for publication; and

Dr. Hofmeyer of the S.A. Institute of Medical Research, who reported on the bone marrow biopsy.

REFERENCES

1. Copeman, H. A. (1956): Med. J. Austral., **2**, 925.
2. Douglas. W. A. (1959): Med. J. Austral., **2**, 564.
3. Goodman, L. A. and Wolff, S. M. (1959): J. Amer Med. Assoc., **171**, 2208.
4. Harrington, W. J., Minnich, V., Hollingworth, J. W. and Moore, C. V. (1951): J. Lab. Clin. Med., **31**, 10.
5. Pader, E. and Grossman, H. (1956): N.Y. State J. Med., **56**, 1905.
6. Richmond, P. W. (1957): N.Z.Med.J., **56**, 573.
7. Ogilvie, H. and Parry, T. E. (1952): Brit. Med. J., **2**, 977.
8. Dameshek, W. and Grassi, M. A. (1946): Blood, **1**, 339.

THE ROLE OF HALOPERIDOL (A PSYCHOTOMIMETIC) IN ANAESTHESIA

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Sir Charles Sherrington defined pain as 'the psychical adjunct of an imperative, protective reflex'[1] and, although it has since been established that pain is indeed a specific sensory modality, this emphasis on the psyche has become of great practical importance in anaesthesia. Beecher has done a tremendous amount of investigation into the two components

characterizing pain in man,[2] viz. the perception of pain and particularly the reaction to this original sensation. It was shown very impressively in a comparative study[3] on wound pain that of wounded soldiers about one third wanted medication to relieve their pain and two thirds did not. Of civilians suffering from far less tissue trauma, four fifths wanted medication to relieve their pain. To the wounded soldier his wound was a good thing; his wound meant escaping alive from the battlefield; while to the civilian his essential operative wound was nevertheless a depressing and calamitous event.

The best 'psychotomimetic' is undoubtedly a sympathetic anaesthetist. However, 'the proficiency of an anaesthetist, whether he be physician, dentist, nurse or special technician, depends as much on aptitudes and capacity as on schooling and experience; and, as in other spheres of human endeavour, certificates of qualification and degrees do not afford an entirely reliable means of measuring efficiency.'[4] Raginsky also pointed out that men had taken up anaesthesia as a specialty often because they consciously or unconsciously did not want to be bothered with the patient-physician relationship. Some 'preferred a specialty which allowed them to get rid of their own hostility (repressed) by "slapping" on a face mask and putting their patients to sleep and consequently into a more submissive role. . . .'[5] Particularly with regard to regional blocks we know that occasionally a wrong technique carried out by a man of suitable personality may do more good than the right technique used by an individual of unsuitable temperament for the operation involved.

For more than three months we have been using 'Haloperidol,' a new potent psychotomimetic agent quite unrelated to reserpine, the phenothiazine derivatives and other tranquillizers of varied chemical structure such as meprobanate, benactyzine and methaminodiazepoxide. Haloperidol is a substituted butyrophenone with the formula shown in Fig. 1.

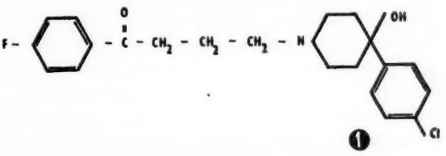

Fig. 1. Structural formula of Haloperidol.

Pharmacologically Haloperidol is similar to the potent phenothiazines but it has no effect on the blood pressure and there is no 'soporific' action. We have kept careful records of 100 patients who received this drug, and we could find no alteration in the blood pressure or 'depressive' action that could reasonably be attributed to the 'Haloperidol.'

METHOD OF TRIAL AND RESULTS

One hundred patients scheduled for all types of major and minor surgery under regional and general anaesthetic methods received the drug in doses dictated by the preoperative assessment.

Table 1 shows the age distribution of the 100 patients, as well as the duration of the operation, the effect of Haloperidol on the amount of anaesthetic required and the post-operative state of the patients.

TABLE 1 : ANALYSIS OF RESULTS

Age (In Years)	*Number of Cases*	*Duration of Operation (In Minutes)*	*Number of Cases*	*Effect on Amount of Anaesthetic Necessary*	*Number of Cases*	*Post-Operative State*	*Number of Cases*
16—30	41	Up to 30	19	Markedly reduced	11	*Delay in Awakening:*	
31—50	37	31—45	6	Reduced	56	No delay in awakening	98
						Some delay in awakening	2
51—60	12	46—60	24	Not reduced	33	*Restlessness:*	
61—80	10	61—90	24			No restlessness	100
						Nausea:	
		91—120	11			No nausea	95
		121+ :	16			Some nausea	5
						Vomiting:	
						No vomiting	95
						Vomiting	5

Five patients underwent caesarean section under lumbar epidural analgesia. The only premedication here consisted of 10 mg. Haloperidol intravenously 5 minutes before induction of the block, in all cases accomplished with 20 ml. 2% Lignocaine containing 1 : 200,000 adrenaline. All slept soundly during their operation but could be roused at any time, when they responded in an alert and sensible manner. None of the infants was depressed (the Apgar score in all being 6-10), and post-operatively none vomited or required medication for pain for at least 2 hours.

Five consecutive patients for mitral valvotomy received 10 mg. Haloperidol intramuscularly in combination with Pethidine 100 mg. and Atropine 0.65 mg. The first 4 responded uneventfully with an early awakening just as was expected in the absence of Haloperidol medication, except that none at all vomited, and the clinical impression was that they were quieter and more content than otherwise. The fifth patient presented a dramatic object lesson in clinical 'experimentation.' This 28-year-old woman responded to commands in the theatre on completion of the operation. About 10 minutes later a surgeon made the apt observation: 'Your new drug certainly appeared to have decerebrated this patient!' And she presented indeed an appalingly disquieting appearance. Her mouth was wide open and she appeared to be in a coma; she appeared incapable of speech but still made at least some effort to obey commands. Soon after that she developed localizing signs of a typical large unilateral cerebral defect, and her subsequent course was that of a large cerebral embolism which gradually improved during the ensuing weeks. The Haloperidol should, of course, never have been blamed for causing the stupor and severe central nervous system depression. Its main advantage is its freedom from soporific effects.

Most of our patients received 5 mg. (occasionally 2.5 mg.) of Haloperidol intramuscularly one hour pre-operatively. Five patients anaesthetized consecutively for plastic operations received nothing else as premedication. Although all reported no effect at all, the ward sister said that they all slept 'like logs' for most of the time before they were taken to the theatre.

One of these patients complained so bitterly about the lack of 'the usual effect' that he was given Pethidine, somewhat against one's better judgment, although he was disfigured and was threatening to refuse further hospital treatment; he claimed to have a feeling of impending doom. Like so many of his grossly disfigured fellows coming to plastic surgery, he had attempted suicide before.

The next patient was a nurse aged 19 who was not much better adjusted. A year previously a rhinoplasty had failed, largely because she did not co-operate at all. She had the staff in consternation for days, threatening suicide by jumping off the balcony. Over an hour pre-operatively she received 100 mg. Pethidine, 25 mg. Chlorpromazine and 0.65 Atropine. Despite this she arrived in the theatre full of complaints, threats and truly remarkable recalcitrancy. Thus it took all the patience of one of us to persuade her to allow an intravenous injection (as long as 'it wasn't Pentothal'). We thereupon administered 15 mg. Haloperidol and a little later some Brietal (methohexitone). Her convalescence was so satisfactory that it was quite unremarkable.

The same day a 31-year-old lady also for rhinoplasty and also very argumentative was given the same premedication. In this case the systolic blood pressure was only 80 mm. Hg. one hour after the first injections, but prior to the Haloperidol. Immediately after 15 mg. of the latter intravenously it was 90 mm. Hg, and after packing of the nose with 10% Cocaine it rose further to 95 mm. Hg, while the pulse rate slowed from 132 per minute to 96 per minute during this same period. Post-operatively she was clearly 'hard hit,' but there was no delay in waking. Her blood pressure was labile but did not give rise to concern.

If Pethidine was given its action was clinically potentiated, just as was the action of all anaesthetics. The only scientific evidence we obtained to support this impression was the smaller percentage of Halothane we were able to use. There were, however, far too many variables to allow us to assess this point properly.

DISCUSSION

A recent paper[8] listed the 4 aims of premedication. Haloperidol adequately fulfils 2 of these aims in that it lessens preoperative anxiety, fear and emotional tension in general and, in addition, makes the induction and maintenance of anaesthesia easier.

The amount of anaesthetic required was lessened in most cases.

Haloperidol does not produce hypotension and, post-operatively, most patients experienced no delay in waking, restlessness, nausea, or vomiting.

It is clearly making nonsense of pre-operative rounds by anaesthetists to attempt the use

of any one drug as a routine for premedication; yet this is exactly what the early investigators in England did in their preliminary unfruitful usage of Haloperidol in anaesthesia. Johnstone and Nisbet[6] found that Haloperidol altered the response to Sernyl, but we do not know what relevance, if any, this holds for premedication of the surgical patient. Similarly J. W. Dundee[7] used 10 mg. Haloperidol as premedication for 17 consecutive minor gynaecological procedures, and found its effect very similar to that of promethazine 50 mg., except for the latter's anti-analgesic effect which Haloperidol lacks. Three patients were fine for 28 hours and then developed acute pseudo-Parkinsonism, a possible complication of all the potent phenothiazines. We do not understand why Dundee and others gave Haloperidol in large doses (10 mg.) to these women. The drug is a long-acting and potent psychotomimetic. Surely its use is wrong in the average patient requiring a dilatation and curettage.

Like Johnstone, we have given Haloperidol to over 100 cases, but unlike all the others, we have largely given it where there was some psychological problem, or where the psychological stress was severe, such as is the case so often in patients about to undergo heart surgery or caesarean section. Like Johnstone, we have seen no pseudo-Parkinsonism at all, although 20 of our patients were over 60 years of age, and some had very abnormal nervous systems functionally and organically. Thus one man of 29 years had a subphrenic abscess drained under a thoracic epidural block. At the time he suffered from acute delirium tremens, but his confusion and restlessness abated after 10 mg. of Haloperidol intravenously.

On the basis of our experiences recorded in this paper we have arrived at the following hypothesis. Haloperidol profoundly alters the mood; if the latter is best left as it is, then medication ought to be confined to analgesics, anticholinergics and so on, according to specific requirements. If, however, the mood of the patient is likely to be unduly affected by a surgical procedure, if the stress is likely to be severe, or if the mood of the patient is already such as to render the intended surgery uncertain of success due to questionable co-operation from the patient, then it has been our experience that Haloperidol is indeed a useful premedication. Because it is a long-acting and very potent drug, its use in out-patients must only be undertaken after careful consideration.

Thus it is our impression that people are more docile and manageable after Haloperidol without the otherwise inevitable 'hangover' and depression seen after the administration of barbiturates and most tranquillizers. On the other hand, these patients did frequently fall asleep or appeared to be asleep post-operatively in spite of their alert and prompt response to questions and other mild stimuli. Thus on 2 occasions we found patients able to stand perfectly erect without swaying for 2 minutes with closed eyes within 2 hours after receiving 5 mg. Haloperidol intravenously, and yet they appeared fast asleep 5 minutes afterwards.

Although the anti-emetic effect of Haloperidol is unquestioned, we prefer perphenazine (Trilafon) 5 mg. where this action is particularly desirable, because such use is better documented as affecting vomiting and very little, if anything else. In an over-anxious patient where hypotension and depression are unlikely to be troublesome, Chlorpromazine is the drug of choice. Before painful procedures to be done under barbiturate and evanescent general anaesthetics, an opiate is very desirable. Atropine should not be omitted before chest surgery and certain types of general anaesthetics, such as Halothane, Chloroform, Cyclopropane and the muscle relaxant Suxamethonium. Similarly cortisone, insulin, scopolamine, barbiturates, antibiotics and a host of other drugs all have their unique indications. In addition, we believe Haloperidol will find a place in the premedication of the maladjusted, recalcitrant patient generally referred to as 'difficult.' However, just as patients should not be denied the comfort of a light general anaesthetic merely because they have been given a regional block, so also should one never hesitate to add other drugs where indicated, such as Pethidine before painful extirpation operations. In plastic surgery, on the other hand, it is probably well to omit the opiate in view of the tragic frequency of addiction iatrogenically induced in these patients who are so often subjected to numerous operations. Certainly any tendency towards stereotyped routine premedication is to be deprecated. No one drug is as yet a panacea in any way in anaesthesia.

SUMMARY AND CONCLUSIONS

The nature and dosage of premedicant drugs in anaesthetic practice must be based on individual assessment and not on stereotyped routine. Thus, on the basis of 100 *selected* patients, in all of whom something appeared to be gained from the use of a psychotomimetic drug, Haloperidol was found to fulfil this expectation satisfactorily.

Other drugs were also used as indicated.

No side effects at all were encountered.

Thanks are due to Keatings Pharmaceuticals Limited, Johannesburg, for liberal supplies of Haloperidol (made by G. D. Searle & Co. Ltd.) and for their expert advice.

REFERENCES

1. Sherrington, Sir Charles (1947): *The Integrative Action of the Nervous System,* 2nd ed. London: Cambridge University Press.
2. Beecher, H. K. (1959): *Measurement of Subjective Responses.* New York: Oxford University Press.
3. Beecher, H. K. (1956): J. Amer. Med. Assoc., **161,** 1609.
4. Raper, H. R. (1945): *Man against Pain.* New York: Prentice-Hall Inc.
5. Raginsky, B. B. (1950): Anesthesiol., **11,** 391.
6. Johnstone, M. and Nisbet, H. I. A. (1961): Proc. Roy. Soc. Med. *In the press.*
7. Dundee, J. W. (1961): Proc. Roy. Soc. Med. *In the press.*
8. Mushin, W. W. (1960): Brit. Med. J., **1,** 1558.

Fig. 1. Structural formula of Haloperidol.

NOTES AND NEWS : BERIGTE

Mr. I. Norwich, Specialist-Surgeon of Johannesburg, has returned from overseas, having attended the International Surgical Congress in Dublin. He also visited Europe and Russia.

* * *

Dr. M. M. Posel of Johannesburg has recently returned from a visit to Medical Congresses in London, New York, Boston and San Francisco.

* * *

Mr. Henri J. du Toit, M.B., B.Ch., Dip. Surg. (Rand), F.R.C.S. Edin., formerly Head of a Surgical Unit, Baragwanath Hospital, and the University of the Witwatersrand, has commenced practice at 10 Jenner Chambers, Jeppe Street, Johannesburg, as a Specialist Surgeon. *Telephones*:— *Rooms*: 23-5854, 23-6684; *Residence*: Eikenhof 74 (dial 909 for Eikenhof).

* * *

THE SOUTH AFRICAN MEDICAL AND DENTAL COUNCIL

VACANCY FOR AN ELECTED MEDICAL PRACTITIONER

It is notified in terms of Regulation 3 (3) of the First Schedule to the Medical, Dental and Pharmacy Act, 1928 (Act 13 of 1928) as amended, that the following persons have been validly nominated as candidates for election as a member of the South African Medical and Dental Council for the unexpired portion of the quinquennial period ending on 31 December 1963, *vice* Dr. J. Black, resigned:

Frack, Isidore, Johannesburg.
Freed, Louis Franklin, Johannesburg.
le Roux, Jonathan Johan du Pré, Rosebank, C.P.
Schneider, Tobias, Johannesburg.
Turton, Edwin Wilberforce, Boksburg North.

As the number of persons so nominated by medical practitioners exceeds the number of persons to be elected, Wednesday, 22 November 1961, is appointed by me as being the day on or before which every person entitled to vote at the election as a medical practitioner may sign and transmit or deliver to me a voting paper described in the Third Annexure to the First Schedule of the said Act. A voting paper will be posted to the last registered address of each person qualified to vote at the election.

W. H. Barnard,
Returning Officer.

6115 Oranje-Nassau Building,
188 Schoeman Street,
P.O. Box 205, Pretoria.
6 October 1961.

* * *

AN ENGLISH: AFRIKAANS CATALOGUE OF SURGICAL INSTRUMENTS

Protea Holdings Limited (in association with Medicon) have published a comprehensive catalogue of surgical instruments in both official languages.

This is the first time that a complete index of surgical instruments is available in Afrikaans. The book is elegantly printed and bound in an attractive linen cloth hard cover. The volume consists of 225 pages and its over-all size is $11\frac{3}{4}$" by $8\frac{1}{2}$".

Copies are available in the medical school libraries throughout South Africa. As the catalogue has also been distributed to all hospitals and Nurses Training Colleges in South Africa, it is readily accessible for reference throughout the Republic.

* * *

SMITH KLINE AND FRENCH LABORATORIES

AWARD FOR POST-GRADUATE CLINICAL STUDY IN SOUTH AFRICA

The Selection Committee has appointed Dr. John Knobel of Dewetsdorp, O.F.S., to this Award for 1961.

The Award has a value of R600.00 and is tenable at any medical school in South Africa for a period of 2 months. Dr. Knobel has elected to do his course of post-graduate study at the University of Pretoria and the Pretoria General Hospital.

JOHNSON AND JOHNSON AWARDS FOR POST-GRADUATE CLINICAL STUDY IN SOUTH AFRICA

The Selection Committee has appointed the following candidates:

Dr. B. Bell of Standerton.

Dr. H. A. Church of Meyerton.

The value of the Award is R600.00 and is tenable for a period of 2 months at any medical school in South Africa.

* * *

ERRATUM

In the issue of this Journal published on 21 October 1961, in line 11 of the last paragraph of the left-hand column on p. 447, ' severe CO_2 poison- ' should read ' severe CO poison-.'

* * *

Dr. Robert Kamener, *South Africa* (left) examines trays of coated tablets awaiting polishing while visiting the pharmaceutical laboratories of Eli Lilly and Company at Indianapolis, U.S.A.

Dr. Kamener is the recipient of a Lilly medical fellowship which provides for advanced study in cardiopulmonary physiology at the University of Pennsylvania Graduate School of Medicine.

* * *

A NEW FILM ON DIURESIS

In view of the current importance of modern diuretics, Ciba Ltd. (Basle, Switzerland) have produced a film dealing with electrolyte and water metabolism in health and disease. The film ranges over topics as diverse and complicated as the physiology of urine formation, pathological changes affecting the kidney and renal function, the pathogenesis of oedema and, finally, the pharmacological principles underlying the rationale of treatment.

The film is destined primarily for general practitioners. The theoretical aspects have been presented briefly to allow more time for a description of the commoner diagnostic and therapeutic procedures; but certain theoretical concepts have been included in so far as these are calculated to ensure a more thorough understanding of the new therapeutic principle of saluresis.

Specialists from various countries have collaborated in the making of the film. The *Anatomy and Physiology of the Kidney* are outlined in detail by Prof. R. F. Pitts (Cornell University, New York), after which Prof. C. Bartorelli (University of Siena, Italy), discusses *Disorders of Renal Function*, including especially glomerulonephritis, and their treatment. The scene then changes to London, where Prof. W. S. Peart (St. Mary's Hospital) deals with *Recent Developments in the Therapy of Chronic Nephritis*.

Differential Diagnostic Procedures provides Dr. C. Brun (Copenhagen) with an opportunity of giving a skilful demonstration of the technique of renal biopsy. The *Nephrotic Syndrome in Children* and other forms of oedematous disease, e.g. liver cirrhosis, are discussed by Prof. R. S. Mach and Prof. A. Müller (Geneva University) with particular reference to the role of aldosterone. Finally, the film concludes with an account of *The Pharmacological Properties of Diuretic Agents* (mercurials, carbonic anhydrase inhibitors, spirolactones and chlorothiazides) whose mode of action is illustrated by a vivid series of animated drawings.

The film, which is in colour and has a running time of about 45 minutes, gains considerably from the judicious use of various aids which, though generally reserved for entertainment films, can (when employed with discretion) add considerably to the interest and appeal of a scientific film as well. The result is, both medically and cinematographically, a synthesis, in which the problem of presenting a difficult subject in an attractive manner has been brilliantly solved.

Following its successful premiere at the 43rd South African Medical Congress at Cape Town the film is now available on loan from Ciba (Pty.) Ltd., P.O. Box 5383, Johannesburg.

* * *

A NEW, SIMPLE TUBERCULOSIS TEST

THE TINE TEST

New techniques for detecting tuberculosis by means of a simple skin test were reported in the U.S.A. recently.

Delegates to the annual meeting of the National Tuberculosis Association heard investigators report favourably on a new technique for administering the skin test, called the tine test. The test was developed by Dr. Sol R. Rosenthal of the Chicago Municipal Tuberculosis Sanitarium in conjunction with researchers at Cyanamid International's Lederle Laboratories.

Various tuberculosis skin tests have proved valuable to physicians and epidemiologists, but the method of administration has long been a subject of controversy.

The current standard is the Mantoux test, which involves the intradermal injection of tuberculin. The test is highly accurate, but does have certain drawbacks. Natural aversion to injections and the problems of sterilization in mass detection programmes have spurred efforts to develop other methods of administering the test.

A positive skin reaction to tuberculin indicates that the individual has had contact with the tubercle bacillus and, as a result, has developed a sensitivity to tubercular protein. However, active tuberculosis may not be present.

The tine test uses a plastic cylinder, shaped like a thimble, which holds a set of steel prongs or tines on which the tuberculin has been dried. The prongs are simply pressed against the patient's skin. The entire apparatus can then be discarded. As in the Mantoux test, readings ordinarily can be made after 48 hours.

According to Dr. Harold J. Lynch, of the U.S. Public Health Service, 'the tine test appears to offer great promise as a simple, disposable tuberculin test which eliminates the problems of sterility, preservation of antigen potency and the depth of injection which are encounted with the Mantoux test'.

More than 94% of the 4,048 school children who were negative to the Mantoux were also negative to the tine technique, according to Dr. Lynch. He indicated that the tine test was positive in 92.3% of those shown positive by the Mantoux method.

Dr. Rosenthal reported that his various studies indicated the percentage of agreement between the tine test and the Mantoux was between 86% and 93.8%.

A high correlation between the tine and the intradermal tests was also found among 800 patients hospitalized for tuberculosis, and therefore known to be positive, according to Dr. D. C. Capobres, who reported on a study at the Missouri State Sanatorium.

Dr. Edith Lincoln of New York reported that the tine test had a correlation of 97% with the Mantoux reaction of 5 mm. and over (size of the skin reaction which determines the degree of positivity) in a group of 250 children with previously proved tuberculosis.

The tine test is still in the experimental stage. It cannot be determined at this time when such a product will be generally available to physicians.

* * *

SANDOZ (1886-1961): 75TH ANNIVERSARY

This year marks the 75th anniversary of Sandoz Limited. To commemorate the occasion a special anniversary issue of *Triangle*, the Sandoz Limited publication issued from Basle, has been published which contains the following original articles:

Chemical Protection against Ionising Radiation (*Prof. Z. M. Bacq*).

The Present Status and the Future Development of the Physician Anaesthetist (*Prof. H. K. Beecher*).

The Physiological Bases of the Pharmacodynamics of the Cerebral Circulation (*Prof. D. Bovet*).

Biochemistry and the Insect World (*Prof. A. Butenandt*).

Interpretation of the Encephalogram in Epilepsy (*Prof. H. H. Jasper*).

The Production of Mechanical Energy on the Principle of Animal Muscular Action (*Prof. W. Kuhn*).

Pulmonary Hypertension in Congenital Disease of the Heart and Great Vessels (*Prof. J. Lenégre*).

The Lungs in Heart Disease (*Prof. J. McMichael*).

Trigeminal Neuralgia (*Prof. H. Olivecrona*).

Arterial Reconstruction (*Prof. C. Rob*).

Histophysiological Aspects of Signal Transmission in the Nervous System. The Role of Synaptic Vesicles (*Prof. E. De Robertis*).

Migraine in Children (*Prof. B. Vahlquist*).

PREPARATIONS AND APPLIANCES

ANATENSOL ELIXIR

A new liquid formulation of **Anatensol**—the tranquiliser that relieves anxiety and tension without clouding consciousness—has been announced by Squibb.

Anatensol Elixir is Squibb Fluphenazine Dihydrochloride supplied in a palatable, orange-flavoured elixir for 24-hour control of mild, temporary behaviour problems in children. **Anatensol** Elixir is also intended for 24-hour management of anxiety and tension states in adults who prefer liquid medication or who may have difficulty swallowing tablets. Each c.c. of **Anatensol** Elixir provides 0.5 mg. of Squibb Fluphenazine Dihydrocholride.

A highly effective tranquillizer, **Anatensol's** action is inherently long-acting. It also offers the advantage of control of symptoms at the lowest dosage of any anti-anxiety agent. Thus in most children, an initial dose as low as 0.25 mg. once a day or 0.5 mg. once a day will control symptoms. In adults, the recommended starting dosage is 1 mg. once a day.

Clinical experience has demonstrated that **Anatensol** has remarkable effectiveness in the treatment of behavioural problems in children, and in managing adult anxiety and tension states due to environmental situations or produced as an emotional reaction to physical ailments.

In children or adults, **Anatensol** at the recommended dosages is well tolerated. It should not, however, be used in the presence of severe depression.

Anatensol Elixir is available in a 15 c.c. bottle with plastic dropper calibrated at 0.5 c.c. and 1.0 c.c.

Further information can be obtained from:

Squibb Laboratories (Pty.) Ltd., P.O. Box 48, Isando, Transvaal. (Telephone: 975-4614.)

RESOTREN COMPOSITUM

F.B.A. Pharmaceuticals (S.A.) (Pty.) Ltd., take pleasure in introducing **Resotren Comp.,** a new specific treatment for intestinal and extraintestinal amoebiasis.

Composition: Each tablet contains:

Resotren (molecular compound of chloroquine + iodohydroxyquinoline sulphonate)	75 mg.
Resochin (chloroquine diphosphate)	200 mg.
di-iodo-hydroxyquinoline	300 mg.

Indications:

1. All forms of acute and chronic, intestinal and extraintestinal amoebic infections.
2. Non-specific dysenteric conditions.
3. Prophylactic protection against amoebic infections and malaria.

Mode of Action: Di-iodo-hydroxyquinoline and iodo-hydroxyquinoline sulphonate are both well known as effective intraluminal amoebicides whereas chloroquine acts as a systemic amoebicide via the blood stream, potentiating the action of the former.

Dosage: In mild infections adults take 1 tablet 3 times daily after meals, in severe infections 2 tablets 3 times daily. Children take correspondingly less.

Side Effects: **Resotren Comp.** has no laxative effect. With the recommended doses no side effects are to be anticipated. Overdosage may give rise to lassitude, blurred vision and in rare cases hypersensisive skin reactions. All such symptoms disappear when treatment is suspended or dosage is reduced.

Packings: **Resotren Comp.** is available in tubes of 20 tablets and bottles of 300.

For further information please write to:
F.B.A. Pharmaceuticals (S.A.) (Pty.) Ltd., P.O. Box 10233, Johannesburg.

BAYRENA

Farbenfabriken Bayer AG, world-known for their discovery of the first sulphonamide, **Prontosil**, by Prof. Domagk in 1932, have now introduced **Bayrena**, the latest advancement in long-acting sulphonamides.

Bayrena is 2-sulphanilamido-5 methoxypyrimidine.

Bayrena is superior in its bacteriostatic effect due to highest concentrations of free active sulphonamide in serum, tissues, urine and bile. Rapid complete absorption and slow excretion guarantee full therapeutic effect with only 1 tablet daily.

Bayrena is indicated in all bacterial infections caused by sulphonamide-sensitive organisms, i.e. infections of the respiratory, biliary, urogenital and gastrointestinal tract as well as skin infections.

Bayrena is very well tolerated. In large-scale clinical trials, no serious side effects occurred. Patients with impaired renal function should not be treated with any long-acting sulphonamide, including **Bayrena**.

Bayrena is available in tablets of 0.5 g each. It is supplied in boxes of 8 and 40 tablets.

Further particulars can be obtained from the sole distributors in South Africa:
F.B.A. Pharmaceuticals (S.A.) (Pty.) Ltd., P.O. Box 10233, Johannesburg.

TREMARIL (WANDER)

Tremaril is a novel chemical compound with parasympathicolytic and histaminolytic properties, which effectively calms tremor and loosens muscular rigidity, and provides a means of exerting a favourable influence on extrapyramidal disorders of movement and muscle tone (tremor and rigidity). On tremor (trembling, coarse tremor) in particular, it has a selective sedative action which is independent of its effect of relaxing muscular rigidity. It likewise produces appreciable improvement in the physic and autonomic disturbances that often accompany Parkinson's syndrome.

Indications: All forms of Parkinson's syndrome: idiopathic, post-encephalitic and arteriosclerotic parkinsonism, and parkinsonoid manifestations during treatment with neuroplegics; residual symptoms and sequelae in operated parkinsonian patients; senile tremor.

Tremaril is supplied in 2 forms: tablets and bitabs.

Dosage: ½ tablet 3-6 times daily increasing dosage according to patient's requirements.

Contra-indications: Intestinal hypotonia and atony, danger of retention of urine (as in prostatic hypertrophy, tachycardiac disorders, glaucoma.

Further information from:
Protea Pan Africa Pharmaceuticals Limited, P.O. Box 4699, Johannesburg. *Telephone:* 22-1155.

TANDERIL

A POTENT ANTI-INFLAMMATORY AND ANTI-PYRETIC AGENT

J. R. Geigy S.A., announce the introduction of **Tanderil,** a potent anti-inflammatory and anti-pyretic agent with pronounced anti-exudative effects.

Description: Each tablet contains 100 mg. of 1-phenyl-2-(p-hydroxyphenyl)-3, 5-dioxo-4-n-Butylpyrazolidine monohydrate. Identical with a metabolite of phenylbutazone.

Indications: Post traumatic inflammation and swelling; Non-traumatic inflammation of the locomotor apparatus; Inflammation and swelling after operations; Inflammation of the uterine appendages and of the pelvic connective tissue; Inflammation of the blood and lymph vessels and of the eye; Adjuvant to the chemotherapy of infective diseases.

Properties: Potent anti-inflammatory, anti-pyretic and pronounced anti-exudative effects; Rapid resolution of the inflammatory process; Prompt subsidence of fever, distinct fall in ESR. It has been shown that **Tanderil** does not change the antibody titre.

Contra-indications: Gastric and duodenal ulcer; cardiac, renal and hepatic insufficiency; leucopenia, haemorrhagic diatheses and hypersensitivity to drugs.

Dosage: Sugar coated tablets of 100 mg. To be taken with meals. *Induction:* 2 tablets 2 to 3 times a day. *Maintenance:* 1 tablet 3 times a day.

In long-term therapy, treatment should be discontinued for 1 or 2 days each week. Young children and infants should not receive **Tanderil.**

Packings: In containers of 30, 150 and 1,000 sugar coated tablets each of 100 mg. at R1.88, R8.61 and R45.30 each respectively.

Further information may be obtained from: Pharmakers (Pty.) Limited, P.O. Box 4125, Cape Town, and P.O. Box 1738, Johannesburg.

TITRALAC FOR PEPTIC ULCER

Riker Laboratories have released **Titralac,** a new formulation for the routine control of peptic ulcer where antacid therapy or milk diet has been adjudged the best method of long-term treatment. It is, of course, also indicated for gastric hyperacidity whether caused by the administration of drugs or oral antibiotics, dietary indiscretions or of unknown origin. There are no contra-indications.

Titralac is composed of only 2 ingredients, both buffering agents, acting in different ways to complement each other. The ratio of glycine to calcium carbonate is 3 : 7.

Glycine, an amphoteric substance, neutralizes both acid and base substrates. It buffers at a lower acid level than does calcium carbonate. These interactions give broad range buffering with a characteristic titration curve more closely resembling that of milk than is available with any other antacid preparation.

CORRESPONDENCE

DURBAN PROVINCIAL HOSPITALS AS COMPETITORS OF PRIVATE MEDICAL PRACTICE

CRITERIA FOR RECOGNIZING MEDICAL AID SOCIETIES

To the Editor: Congratulations to *Private Practice*. He has seen the light. Let us hope he is the first of many and that before I die or retire a sufficient number will have united to end this essentially stupid business of the local hospital grabbing all it can, while nobody benefits. I have tried for years to interest my colleagues but have been generally regarded as a crank if not a blasphemer. As I have said, nobody benefits. The hospital loses money on every patient, medical aid or otherwise. The family doctor loses income and patients. How can he compete with the resources of a great hospital? Fortunately, its very size makes it cumbersome and unwieldy and a goodly number of old faithfuls return remorseful and dissatisfied with what they term off-hand and indifferent attention, mainly from Housemen and Registrars.

The hereditary card system prevails. A patient is diagnosed or misdiagnosed on his first visit and a generation of Housemen follow on with treatment often bearing no relationship to the condition as it progresses. I would hate them to change, however, or we GPs would never get any patients back. What I would like to see changed is the principle, as *Private Practice* indicates.

The general hospital is for indigents. A patient whose fees are provided by a Medical Aid Society or the Workmen's Compensation Commissioner has no place in the general hospital. He should be in the private wards (if any) or in a nursing home. It is as simple as that and if the Medical Association's Federal Council had any real concern for the GP, they should be hard at it trying to see things put right—trying, for example, to find out exactly why the Addington Hospital will not provide private wards. When they were abolished during the war the excuse was lack of staff. Then it was lack of space. Neither these excuses holds water to-day. We in Durban know why there are no private wards but the law of libel prevents us from saying why.

When an injustice persists for long enough it becomes the established practice and even the victims come to accept it as such in time. This is how things are to-day in Durban and so *Private Practice's* letter, if it can stir up some action, will have done much good.

35 Years a GP.

Durban.

ORAL RESUSCITATION AND CLOSED CHEST CARDIAC MASSAGE

To the Editor: The current enthusiasm for mouth-to-mouth breathing as a means of re-starting respiration is understandable, but it should be clearly understood that it is not quite the panacea for all cases of apnoea that Prof. O. V. S. Kok's article[1] seems to suggest. It is, in my opinion, unjustifiable to use it in starting respiration in the newborn infant and that should be emphasized because the anaesthetist is not infrequently involved in the resolution of this problem. The main but not the only objection is the certainty of introducing infection, in concentrated form, into the infant's respiratory tract. An epidemic of pulmonary tuberculosis due to the misuse of this measure by a phthisical midwife has, in fact, been recorded[2] and history has a habit of repeating itself.

I would support wholeheartedly the plea for the instruction of 'all and sundry' in this as the ideal method of First Aid to those in need of artificial respiration in immersion or suffocation accidents, the more so since I have often wondered what type of individual is supposed to be able to apply, e.g. the Holger-Nielsen manoeuvres effectively to any subject weighing more than 100 lb. for more than one or two minutes; but, if it is essential or even advisable that everyone in close proximity to the newborn should wear an impervious mask to minimize the risk of infecting the child, how can it possibly be justifiable to pump into it, with or without a safety valve, the exhalations of one of the most highly contaminated parts of the operator's body? Older individuals have already been exposed to respiratory infections. In the newborn these are particularly dangerous and to add this hazard to those against which the child is already struggling, seems to me quite unjustifiable and quite inexcusable. I have yet to meet the newborn baby which was viable and needed such dangerous and drastic treatment.[3]

As a paediatrician I do not have to deal with the other problem discussed in the second part of the article in question but, as an individual, I hope it may never be my misfortune to be cared for by one of these enthusiasts for restarting hearts which have ceased to function. Why should I be obliged by one of these people to suffer the extremely uncomfortable consequences of their activities, the succeeding inevitable handicaps which they insist I should have, and be preserved in a probably semi-invalid state only to die a second time, or even a third if one of them should again be at hand to 'rescue' me? I wonder if I would not have an excellent case for the recovery of damages for assault? I suspect that I am not alone in this opinion and while I am not aware of any suicidal tendencies, I can raise no enthusiasm for having to die repeatedly and be revived painfully until I contrive to arrange my demise in solitude or at least out of reach of this kind of resuscitation.

REFERENCES

1. Kok, O. V. S. (1961): Med. Proc. **7**, 350.
2. Champneys, F. H. (1911): Brit. Med. J., **2**, 978.
3. Ford, F. J. (1955): S.Afr. Med. J., **29**, 764.

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